

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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Examiner : Rae, Charlesworth E.  
Serial No. : 10/779,306  
Filed : February 2, 2004  
First Named Inventor : Rocco Vincent Burgo  
Title : **Tertiary Amine Functional Complex Polyester and Methods of  
Production and Use**

**RESPONSE TO RESTRICTION REQUIREMENT**

This paper is in response to the Patent Office correspondence dated October 24, 2007.

**Amendments to the Claims** are reflected in the listing of claims which begins on page 2  
of this paper.

**Remarks** begin on page 9 of this paper.

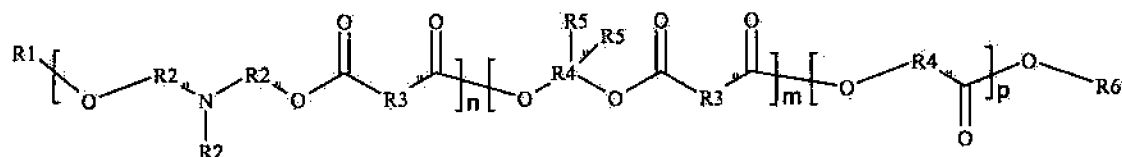
## **AMENDMENT TO THE CLAIMS**

Please amend the application, without prejudice, as follows:

What is claimed is:

1. (Withdrawn) A polyesteramine comprising:  
  
a tertiary amine group;  
  
an ester linkage; and  
  
an alkyl chain.
2. (Withdrawn) The polyesteramine of claim 1, further comprising a hydroxyl group.
3. (Withdrawn) The polyesteramine of claim 2, further comprising a carboxylic acid group.
4. (Withdrawn) The polyesteramine of claim 1, further comprising a carboxylic acid group.
5. (Withdrawn) The polyesteramine of claim 1, wherein the pH is between about 7.0 and about 10.0.
6. (Withdrawn) The polyesteramine of claim 1, wherein the molecular weight of the polyesteramine is between about 600 Daltons and about 5,000 Daltons.
7. (Withdrawn) The polyesteramine of claim 1, further comprising an aryl chain.
8. (Withdrawn) A polyesteramine comprising:  
  
a tertiary amine group;  
  
an ester linkage; and  
  
an aryl chain.
9. (Withdrawn) The polyesteramine of claim 8, further comprising a hydroxyl group.

10. (Withdrawn) The polyesteramine of claim 9, further comprising a carboxylic acid group.
11. (Withdrawn) The polyesteramine of claim 8, further comprising a carboxylic acid group.
12. (Withdrawn) The polyesteramine of claim 8, wherein the pH is between about 7.0 and about 10.0.
13. (Withdrawn) The polyesteramine of claim 8, wherein the molecular weight of the polyesteramine is between about 600 Daltons and about 5,000 Daltons.
14. (Withdrawn) The polyesteramine of claim 8, further comprising an alkyl chain.
15. (Currently Amended) A polyesteramine having the formula:



wherein:

~~the polymer is a random co-polymer;~~

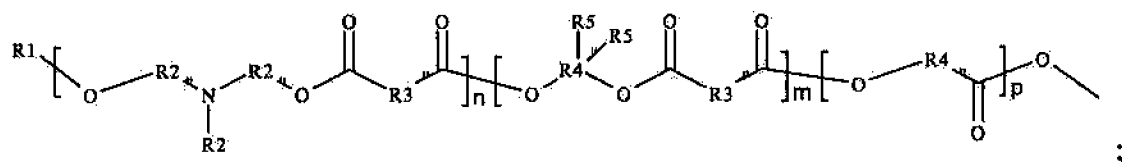
R1 is H or R7(C=O), wherein R7 is C<sub>5</sub>-C<sub>36</sub> aliphatic and/or C<sub>6</sub> aromatic;

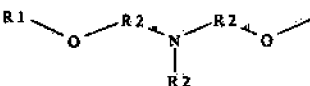
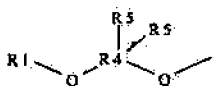
R2 is C<sub>1</sub>-C<sub>6</sub> aliphatic;

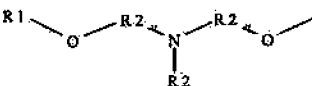
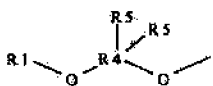
R3 is independently a divalent radical having from 0 to 34 carbon atoms, ~~and/or~~ a divalent aromatic radical having from 6 to 12 carbon atoms, ~~and/or~~ a divalent aromatic radical having 2 carboxylic acid groups;

R4 is independently C<sub>1</sub>-C<sub>200</sub> aliphatic having 0-100 oxygen atoms as ether groups;

R5 is -H, -R4-OH, and/or



R6 is -H, -R7, ,  or combination

of  and  ;

n is an integer between 1-50;

m is an integer between 0-50; and

p is an integer between 0-20.

16. (Original) The polyesteramine of claim 15, wherein R7 is linear, branched or a combination thereof.
17. (Original) The polyesteramine of claim 15, wherein the divalent radical of R3 is linear, branched or a combination thereof.
18. (Original) The polyesteramine of claim 15, wherein the molecular weight of the polyesteramine is between about 600 Daltons and about 5,000 Daltons.
19. (Withdrawn) A method of producing a polyesteramine comprising reacting:
  - a tertiary amine functional polyol;
  - a polyfunctional carboxylic acid; and
  - at least one member selected from the group consisting of monofunctional carboxylic acids and monofunctional alcohols.
20. (Withdrawn) The method of claim 19, further comprising reacting at least one member selected from the group consisting of alcohol, polyol and hydroxyacid.
21. (Withdrawn) The method of claim 19, wherein the tertiary amine functional polyol comprises methyldiethanolamine.

22. (Withdrawn) The method of claim 19, wherein the polyfunctional carboxylic acid comprises at least one member from the group consisting of adipic acid, cyclohexanedicarboxylic acid, sebacic acid, azelaic acid, dodecanedioic acid, phthalic acid, isophthalic acid, terephthalic acid, trimellitic acid, dimer acid, trimer acid, 2,6-naphthalene dicarboxylic acid, and pyromellitic acid.
23. (Withdrawn) The method of claim 19, wherein the monofunctional carboxylic acid comprises at least one member from the group consisting of benzoic acid, 2-ethylhexanoic acid, isononanoic acid, lauric acid (C-12), myristic acid (C-14), palmitic acid (C-16), isomyristic acid (Iso C-14), isopalmitic acid (Iso C-16), isostearic acid (Iso C-18), coconut fatty acid (C8-C18), oleic acid (C18:1), and behenic acid (C-22).
24. (Withdrawn) The method of claim 19, wherein the monofunctional alcohol comprises at least one member from the group consisting of tridecyl alcohol, Guerbet alcohols, coconut fatty alcohols, isooleic alcohol, and isostearyl alcohol.
25. (Withdrawn) The method of claim 20, wherein the polyol comprises at least one member from the group consisting of propylene glycol, 1,3-butylene glycol, cyclohexanedimethanol, trimethylpentanediol, polyoxyalkylene glycol, butyl ethyl propanediol, dipropylene glycol, neopentyl glycol, glycerol, trimethylolpropane, pentaerythritol, and dipentaerythritol.
26. (Withdrawn) The method of claim 20, wherein the hydroxy acid comprises at least one member from the group consisting of lactic acid, glycolic acid, hydroxystearic acid, and citric acid.
27. (Withdrawn) The method of claim 19, wherein the polyesteramine has an acid value from 0 to about 100 mg KOH/g.
28. (Withdrawn) The method of claim 19, wherein the polyesteramine has an acid value from 0 to about 50 mg KOH/g.
29. (Withdrawn) A lubricant composition comprising the polyesteramine of claim 1.
30. (Withdrawn) A cosmetic composition comprising the polyesteramine of claim 1

31. (Withdrawn) A method of using a polyesteramine comprising applying the polyesteramine of claim 1 to skin, hair, nails, keratinous fibers, semimucous membranes and/or mucous membranes.
32. (Withdrawn) A method of using a polyesteramine for industrial lubricant applications comprising applying the polyesteramine of claim 1 to a surface, wherein the polyesteramine is an emulsion in water.
33. (Withdrawn) A lubricant composition comprising the polyesteramine of claim 8.
34. (Withdrawn) A cosmetic composition comprising the polyesteramine of claim 8.
35. (Withdrawn) A method of using a polyesteramine comprising applying the polyesteramine of claim 8 to skin, hair, nails, keratinous fibers, semimucous membranes and/or mucous membranes.
36. (Withdrawn) A method of using a polyesteramine for industrial lubricant applications comprising applying the polyesteramine of claim 8 to a surface, wherein the polyesteramine is an emulsion in water.
37. (Withdrawn) A composition produced by reacting at least one tertiary amine functional polyol, at least one polyfunctional carboxylic acid and at least one member selected from the group consisting of monofunctional acids and monofunctional alcohols.
38. (Withdrawn) The composition of claim 37, further comprising reacting at least one member selected from the group consisting of alcohol, polyol and hydroxyacid.
39. (Withdrawn) The composition of claim 37, wherein the tertiary amine functional polyol comprises methyldiethanolamine.
40. (Withdrawn) The composition of claim 37, wherein the polyfunctional carboxylic acid comprises at least one member from the group consisting of adipic acid, cyclohexanedicarboxylic acid, sebacic acid, azelaic acid, dodecanedioic acid, phthalic acid, isophthalic acid, terephthalic acid, trimellitic acid, dimer acid, trimer acid, 2,6-naphthalene dicarboxylic acid, and pyromellitic acid.

41. (Withdrawn) The composition of claim 37, wherein the monofunctional carboxylic acid comprises at least one member from the group consisting of benzoic acid, 2-ethylhexanoic acid, isononanoic acid, lauric acid (C-12), myristic acid (C-14), palmitic acid (C-16), isomyristic acid (Iso C-14), isopalmitic acid (Iso C-16), isostearic acid (Iso C-18), coconut fatty acid (C8-C18), oleic acid (C18:1), and behenic acid (C-22).
42. (Withdrawn) The composition of claim 37, wherein the monofunctional alcohol comprises at least one member from the group consisting of tridecyl alcohol, Guerbet alcohols, coconut fatty alcohols, isooleic alcohol, and isostearyl alcohol.
43. (Withdrawn) The composition of claim 38, wherein the polyol comprises at least one member from the group consisting of propylene glycol, 1,3-butylene glycol, cyclohexanedimethanol, trimethylpentanediol, polyoxyalkylene glycol, butyl ethyl propanediol, dipropylene glycol, neopentyl glycol, glycerol, trimethylolpropane, pentaerythritol, and dipentaerythritol.
44. (Withdrawn) The composition of claim 38, wherein the hydroxy acid comprises at least one member from the group consisting of lactic acid, glycolic acid, hydroxystearic acid and citric acid.
45. (Withdrawn) The composition of claim 37, wherein the composition has an acid value from 0 to about 100 mg KOH/g.
46. (Withdrawn) The composition of claim 37, wherein the composition has an acid value from 0 to about 50 mg KOH/g.
47. (Withdrawn) A hair conditioner produced by mixing deionized water, butylene glycol, methylparaben, propylparaben, the polyesteramine of claim 1, cetearyl alcohol (and) ceteareth-20, trimethylolpropane tricaprylate/tricaprate and tocopheryl acetate.
48. (Withdrawn) A body wash produced by mixing deionized water, methylparaben, propylparaben, tetrasodium EDTA, sodium lauryl sulfate, TEA-lauryl sulfate, cocamidopropyl betaine (and) glycerin, the polyesteramine of claim 1, ethoxylated coconut oil, tocopheryl acetate and citric acid.

49. (Withdrawn) A shaving preparation lotion produced by mixing stearic acid, pentaerythrityl tetra C5-C9 acid esters, glyceryl stearate (and) PEG-100 stearate, the polyesteramine of claim 1, deionized water, glycerin, triethanolamine and propylene glycol/diazolidinyl urea/methylparaben/propylparaben.

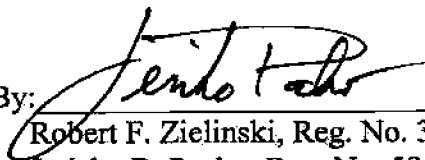


### REMARKS

In response to the Patent Office correspondence dated October 24, 2007, Applicant has listed the claims to include the text of all pending claims, including all "withdrawn" claims. In addition, Applicant has executed the amendment in accordance with 37 C.F.R. § 1.4.

As stated in Applicant's earlier filed paper, in response to the restriction requirement the Applicant has elected, with traverse, Group I, which is drawn to a polyesteramine compound and consists of claims 1-18. In response to the election of species requirement of page 5 of the Office Action, Applicant has provisionally elected the species of claims 15-18. Applicant reserves the right to file divisional applications for the remaining claims. Claim 15 has been amended to clarify the invention. No new matter has been added.

Respectfully Submitted,

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